

**CLASS 147, COOPERING****SECTION I - CLASS DEFINITION**

Includes machines which are used exclusively in the manufacture of wooden barrels, fruit-boxes, baskets, or crates. Coopering does not include machines for sawing, bending, or planing staves or machines for sawing, splitting, cutting, or coiling hoops, except such as separate the hoops from a scored rod by racking or abruptly bending the rod or which combine two or more operations in the production of hoops, as planing and bending or planing and lapping or pointing.

**SECTION II - REFERENCES TO OTHER CLASSES****SEE OR SEARCH CLASS:**

- 29, Metal Working, subclasses 592+ for a method of, and subclasses 700+ for a machine for, assembling articles, as those indicated in the note to Class 227 below, not elsewhere classified.
- 83, Cutting, appropriate subclasses for stave-cutting devices.
- 144, Woodworking, subclasses 114.1+ for a machine for planing staves, subclasses 182+ for a machine for skiving or splitting hoops, and subclasses 254+ for a machines for bending staves.
- 227, Elongated-Member-Driving Apparatus, appropriate subclasses for apparatus for assembling a basket or barrel combined with means to apply a member, e.g., nail, thereto.

**SUBCLASSES**

- 1** Machines which perform some operation not specifically classified and those which do more than merely set up and truss a barrel. They usually croze, howel, and head the barrel and sometimes plane it off.
- 2** Two circularly-grooved end plates into which the staves are fed until the grooves are filled. Most of them shape the barrel, and the staves are secured by truss-hoops.
- 3** Frames within or around which the staves are arranged on end and then confined by truss-hoops.

- 4** Machines for compressing the staves of barrels to receive the truss-hoops.

- 5** Machines for compressing the staves of a barrel by means of conical formers forced upon the ends of the barrel. In some instances hoops are driven by the conical formers.

- 6** Machines which place the heads in the barrel and in some instances form the barrel and insert the head.

**SEE OR SEARCH CLASS:**

- 100, Presses, subclasses 54+ for portable receptacle lid applying presses not elsewhere provided for.

- 7** Machines or implements which force hoops upon barrels by mechanism, not otherwise specifically classified.

**SEE OR SEARCH CLASS:**

- 100, Presses, appropriate subclasses for presses not elsewhere provided for.

- 8** Machines which force the hoops upon barrels by means of cam-gearing presses.

**SEE OR SEARCH CLASS:**

- 100, Presses, subclasses 291+ for reciprocating platen presses, not elsewhere provided for, and in which a cam acts directly to actuate a platen.

- 9** Machines which comprise hydraulic or steam presses for forcing hoops upon the barrel.

**SEE OR SEARCH CLASS:**

- 100, Presses, subclasses 269.01+ for fluid actuated reciprocating platen presses, not elsewhere provided for.

- 10** Machines which force hoops upon barrels by lever or crank gearing.

**SEE OR SEARCH CLASS:**

- 100, Presses, subclass 293 for reciprocating platen presses, not elsewhere provided for, in which a lever acts directly upon a platen to actuate it.

- 11** Machines which force hoops upon barrels by screw-gearing presses.

- SEE OR SEARCH CLASS:  
100, Presses, subclasses 289+ for reciprocating platen presses having a screw and a nut actuator and not elsewhere provided for.
- 12** Machines in which the hoops are forced upon barrels by the impact of a falling weight.
- SEE OR SEARCH CLASS:  
100, Presses, subclasses 265+ for reciprocating platen presses, not elsewhere provided for, having a spring or weight actuator.
- 13** The barrel is clamped in a nonrotating clamp, and a rotary cutter-head carried by a frame which rotates on an axis concentric with the axis of the barrel cuts the croze, howel, or chamfer.
- 14** Machines in which the barrel is rotated on its axis and while rotating cutting-tools are projected radially from a fixed head to croze, howel, or chamfer the staves.
- 15** Machines in which the staves of the rotating barrel are successively brought into engagement with a rotary cutter-head for cutting the croze, howel, or chamfer.
- 16** Machines in which the cutter is carried upon a slide or rest and which is projected into the rotating barrel for cutting the croze, howel, or chamfer.
- SEE OR SEARCH THIS CLASS, SUB-CLASS:  
14,
- 17** Machines in which a tool carried by a swinging rest is brought into engagement with the staves of the barrel as it is rotated on its axis for cutting the croze, howel, or chamfer.
- 18** Machines which are designed for cutting the croze, howel, or chamfer of staves before the barrel is formed and which are not otherwise specifically classified.
- 19** Machines having an endless feeding device for feeding the staves against a rotary cutter journaled in fixed bearings.
- 20** Machines in which the stave is carried upon a sliding support into engagement with a rotary cutter.
- 21** Machines in which the stave is carried into engagement with a rotary cutter by means of a swinging stave-supporting frame.
- 22** Machines in which the crozing, howeling, or chamfering cutter is journaled in a swinging support.
- 23** Machines for crozing staves in which the stave is immovably supported and the croze, howel, or chamfer is cut by a knife carried in a reciprocating carrier.
- 24** Short curved planes constructed to cut the croze, chamfer, or howel in trussed barrels.
- 25** Machines for beveling and tapering the adjoining edges of barrel-staves by jointing-machines not otherwise designated.
- 26** Machines for beveling and tapering the adjoining edges of staves by mechanism which lowers and raises the work-carrying platform as it passes between inclined or tapered revolving cutters.
- 27** Machines for beveling and tapering the adjoining edges of barrel-staves by means of rotary cutters mounted in movable bearings controlled by reciprocating patterns or rotating cams.
- 28** Machines for beveling and tapering the adjoining edges of barrel-staves by means of saws placed at an inclination to each other.
- 29** Machines for beveling and tapering the adjoining edges of barrel-staves by means of large rotating disks provided with knives in their faces.
- 30** Machines for beveling and tapering the adjoining edges of barrel-staves in which the stock is supported by a movable carriage controlled in movement past a single saw by a guiding-track.
- (1) Note. Stave-jointing machines in which the stock slides past a single saw and in

contact with an adjustable guide are included in this subclass.

- 31** Machines for beveling and tapering the adjoining edges of barrel-staves in which the stock is supported by a longitudinally-movable carriage capable of being tilted on trunnions which are located in the extended plane of the saw.

- 32** Machines for beveling and tapering the adjoining edges of barrel-staves by means of a suitable guiding-support and a reciprocating slicing-knife.

SEE OR SEARCH CLASS:

144, Woodworking, subclasses 162.1+ for a wood slicer, generally.

- 33** Machines for beveling and tapering the adjoining edges of barrel-staves by means of reciprocating planes or shaving-tools which are made to follow the contour of a templet or pattern.

- 34** Machines for beveling and tapering the adjoining edges of barrel-staves by means of a saw journaled in a movable frame controlled in its movement by a curved guide. The stock is clamped to a stationary support while being operated upon.

- 35** Machines for beveling and tapering the adjacent edges of laterally-fed barrel-staves by knives placed longitudinally in the periphery of a rotating cylinder.

- 35.5** Machines for finishing staves with convex outer and concave inner surfaces; also, machines for reducing the thickness of staves between their ends, so that they may be more readily bent to give the proper bulge to the barrel.

- 36** Machines for cutting out barrel-heads and shaping the edge thereof to fit the barrel-croze. A few of these machines also plane the heads or bore the joints for dowel-pins.

(1) Note. This subclass comprises machines for forming barrel-heads which are not otherwise specifically classified.

- 37** Machines for holding barrel-head stock concentric with a knife or cutting-tool carried on a rotary arm.

SEE OR SEARCH CLASS:

144, Woodworking, subclass 150 for woodworking by a rotary disk cutter of the end thrust type.

- 38** Machines in which the stock is carried by a rotating chuck into engagement with a rotary saw (plane or dished).

- 39** Lathe-like machines exclusively adapted for forming barrel-heads.

- 40** Machines in which the stock is carried by a rotary chuck and is operated upon by rotating molding-cutters.

- 41** Cutting-tools comprising a radial arm carrying at one end a centering-pin and near its outer end a cutting-tool to be operated by hand.

- 42** Tools for chamfering the staves when set up in barrel form.

- 43** Machines which perform two or more consecutive operations peculiar to the production of hoops, as planing and bending, planing and lapping, or planing and pointing

SEE OR SEARCH CLASS:

144, Woodworking, subclass 41 for a machine for sawing and planing of wood, generally.

- 44** Machines in which bars of wood, checked or split at one end, are separated into hoops by abruptly bending the bars progressively from the checked ends toward the opposite ends.

- 45** Machines which cut the bevels and point the ends of hoops.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

46,

SEE OR SEARCH CLASS:

144, Woodworking, subclass 147 for woodworking shaper machine which uses a reciprocating knife.

- 46** Machines which cut the notches near the ends of hoops, whereby the ends may be interlocked.

SEE OR SEARCH THIS CLASS, SUB-CLASS:

45,

SEE OR SEARCH CLASS:

144, Woodworking, subclasses 75+ for a woodworking mortising machine having a chisel and subclasses 147 for a woodworking shaping machine having a reciprocating knife.

**48** Forms, male and female, for shaping baskets. Formers for shaping fruit-boxes and crates are also included.

**49** Temporary hoops forced upon the barrel to secure the staves in barrel form until they become permanently bent and seasoned or dried.

END